WHAT IS CLAIMED IS:

1. A method for shaping data transmitted in a communication system, the method comprising:

determining whether to authorize transmission of received data having a variable size within a predetermined range, the determination being based on whether a predetermined amount of a time-based variable has substantially elapsed, the predetermined amount being related to a rate shaping criterion, and the determination being made without regard to the size of the received data;

authorizing transmission if the predetermined amount has substantially elapsed; and

determining, if transmission was authorized, a new value for the predetermined amount that must substantially elapse before a further transmission can be authorized.

2. The method of claim 1 further comprising:

receiving the received data; and

transmitting the received data.

3. The method of claim 1 wherein the received data is part of a flow.

4. The method of claim 2 wherein data are at least either received or transmitted in packets.

5. The method of claim 1 wherein the predetermined range includes multiple packet sizes in a packet-based system.

6. The method of claim 1 wherein determining whether to authorize transmission of the received data includes assessing a single bit vector, the single bit vector reflecting whether the predetermined amount has substantially elapsed.

7. The method of claim 1 further comprising determining whether the predetermined amount of the time-based variable has substantially elapsed.

8. The method of claim 7 wherein:

the rate shaping criterion comprises an average transmission data rate,

the time-based variable comprises cycles of a clock, and

the predetermined amount is not less than:

(the size of the previously transmitted data) *

(the clock's frequency) /

(the average transmission data rate).

9. The method of claim 8 wherein the new value for the predetermined amount is not less than:

(the size of the received data for which transmission was authorized) *(the clock's frequency) /

(the average transmission data rate).

10. The method of claim 1 wherein the time-based variable is time.

11. The method of claim 1 wherein the predetermined amount is determined after a first transmission is authorized and completely elapses before a second transmission is authorized.

12. The method of claim 1 wherein the predetermined amount is determined after a first transmission and only substantially elapses before a second transmission is authorized.

13. The method of claim 1 wherein authorizing transmission comprises queuing a packet for transmission.

14. The method of claim 2 wherein the received data are at least either received or transmitted over a dedicated line.

15. The method of claim 2 wherein the received data are received from a wide area network and transmitted to a port aggregator.

16. The method of claim 2 wherein the received data are received from a port aggregator, and transmitted over a wide area network.

17. A computer program, residing on a computer-readable medium, for shaping data transmitted in a communication system, the data having a variable size within a predetermined range, the computer program comprising instructions for causing a computer to perform the following operations:

determine whether to authorize transmission of the data, the determination being based on whether a predetermined amount of a time-based variable has substantially elapsed, the predetermined amount being related to a rate shaping criterion, and the determination being made without regard to the size of the received data;

authorize transmission if the predetermined amount has substantially elapsed; and

determine, if transmission was authorized, a new value for the predetermined amount that must substantially elapse before a further transmission can be authorized.

18. The computer program of claim 17 wherein:

the rate shaping criterion comprises an average transmission data rate,

the time-based variable comprises cycles of a clock,

the instructions for causing the computer to determine whether to authorize transmission of the received data comprise instructions for causing the computer to assess a single bit vector, the single bit vector reflecting whether the predetermined amount of the time-based variable has substantially elapsed, and

the instructions for causing the computer to determine the new value comprise instructions for causing the computer to calculate the new value such that it is not less than:

(the size of the previously transmitted data) *

(the clock's frequency) /

(the average transmission data rate).

19. An apparatus for shaping transmitted data, the apparatus comprising a programmable device programmed to perform at least the following operations:

determine whether to authorize transmission of received data having a variable size within a predetermined range, the determination being based on whether a predetermined amount of a time-based variable has substantially elapsed, the

predetermined amount being related to a rate shaping criterion, and the determination being made without regard to the size of the received data;

authorize transmission if the predetermined amount has substantially elapsed; and

determine, if transmission was authorized, a new value for the predetermined amount that must substantially elapse before a further transmission can be authorized.

20. The apparatus of claim 19 further comprising a memory to store data.

21. A communication system for shaping transmitted data, the system comprising:

means for determining whether to authorize transmission of received data having a variable size within a predetermined range, the determination being based on whether a predetermined amount of a time-based variable has substantially elapsed, the amount being related to a rate shaping criterion, and the determination being made without regard to the size of any received data;

means for authorizing transmission if the predetermined amount has substantially elapsed; and

means for determining, if transmission was authorized, a new value for the predetermined amount that must substantially elapse before a further transmission can be authorized.

22. The communication system of claim 21 wherein:

the means for determining whether to authorize transmission of received data comprises a programmable device programmed to assess a single bit vector, the single bit vector reflecting whether the predetermined amount of the time-based variable has substantially elapsed,

the means for authorizing transmission comprises the programmable device programmed to authorize transmission if the single bit vector reflects that the predetermined amount of the time-based variable has substantially elapsed, and

the means for determining another value comprises the programmable device programmed to determine the amount of the time-based variable that must substantially elapse before a further transmission can be authorized.

23. The communication system of claim 21 further comprising a receiver to receive the received data.

24. A modified token-bucket method for shaping data transmitted in a flow in a communication system, the method comprising:

providing a bucket for each flow, each bucket having a variable size depending on a size of a unit of data previously transmitted on the corresponding flow;

accumulating tokens in each bucket at an average flow rate for the corresponding flow;

authorizing transmission of a unit of data on a particular flow only when the corresponding bucket is full of tokens; and

removing all of the tokens from the bucket for a particular flow when a unit of data is authorized for transmission on that flow.

25. The method of claim 24 wherein authorizing transmission of the unit of data on the particular flow only when the corresponding bucket is full of tokens comprises assessing a single bit vector that reflects whether the bucket is full of tokens.

26. A method for shaping data transmitted in a communication system, the method comprising:

transmitting first data having a variable size within a predetermined range;

waiting, after transmitting first data, until a predetermined amount of a time-based variable has substantially elapsed, the predetermined amount being related to a rate shaping criterion and to the size of the first data; and

transmitting, after waiting, second data having a variable size within a predetermined range.

27. The method of claim 26 further comprising determining a new value for the predetermined amount, the new value being related to the rate shaping criterion and the size of the second data.

28. The method of claim 26 wherein the predetermined amount begins to elapse after the first transmission is authorized.